SUPPORTING STATEMENT

30 C.F.R. §§ 75.310, 75.312, 75.342, 75.351, 75.360, 75.361, 75.362, 75.363, 75.364, 75.370, 75.371 and 75.382 - Ventilation Plans, Tests, and Examinations in Underground Coal Mines

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

Under Section 101(a) of the Federal Mine Safety and Health Act of 1977 (The Act), the Secretary may by rule in accordance with procedures set forth in this section and in accordance with section 553 of title 5, United States Code (without regard to any reference in such section to sections 556 and 557 of such title), develop, promulgate, and revise as may be appropriate, improved mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines. In addition Section 303 requires that all coal mines shall be ventilated by mechanical ventilation equipment installed and operated in a manner approved by an authorized representative of the Secretary and such equipment shall be examined daily and a record shall be kept of such examination.

Underground coal mines usually present harsh and hostile working environments. The ventilation system is the most vital life support system in underground mining and a properly operating ventilation system is essential for maintaining a safe and healthful working environment. Lack of adequate ventilation in underground mines has resulted in fatalities from asphyxiation and explosions.

An underground mine is a maze of tunnels that must be adequately ventilated with fresh air to provide a safe environment for miners. Methane is liberated from the strata, and noxious gases and dusts from blasting and other mining activities may be present. The explosive and noxious gases and dusts must be diluted, rendered harmless, and carried to the surface by the ventilating currents. Sufficient air must be provided to maintain the level of respirable dust at or below 2 milligrams per cubic meter of air and air quality must be maintained in accordance with MSHA standards. Mechanical ventilation equipment of sufficient capacity must operate at all times while miners are in the mine. Ground conditions are subject to frequent changes, thus sufficient tests and examinations are necessary to ensure the integrity of the ventilation system and to detect any changes that may require adjustments in the system. Records of tests and examinations are necessary to ensure that the ventilation system is being maintained and that changes which could adversely affect the integrity of the system or the safety of the miners are not occurring. These examination, reporting and recordkeeping requirements of §§ 75.310, 75.312, 75.342, 75.351, 75.360 through 75.364, 75.370, 75.371, and 75.382 also incorporate examinations of other critical aspects of the underground work environment such as roof conditions and electrical equipment which have historically caused numerous fatalities if not properly maintained and operated.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The records give notice to mine management and the miners on the oncoming shift of mine conditions, identify hazards on working sections during the previous shift, and verify that proper ventilation is being

maintained. The information is available to all interested persons at the mine to assure them that the integrity of the ventilation system is being provided for the miners. MSHA inspectors use the records to determine that tests and examinations, required by the standards, are made.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

The regulations incorporate the option for electronic (computer-based) recordkeeping which has the capability of reducing certain facets of the recordkeeping burden and can improve the usefulness of information and can facilitate reviews of the records. Also, a computer-based main mine fan monitoring system can be used to reduce the required examination of the main mine fan from daily to weekly.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

No similar or duplicate information exists. The records are the results of tests and examinations conducted at individual mines by the mine operator. Similar examinations, tests, and records required by more than one section of Subpart D of 30 C.F.R. Part 75 can be conducted simultaneously. Also, where similar tests and examinations are required by both State agencies and MSHA, the tests are conducted simultaneously and one record is accepted by both agencies. The agency has clarified that state approved books are acceptable for records required by MSHA.

5. If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.

This information does not have a significant impact on small businesses or other small entities. However, MSHA has made available on our web-site various sources of information, such as "Technical Assistance," "Best Practices," and an "Accident Prevention" site. To assist with compliance, these provide tips and general information on various topics.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

MSHA believes that the recordkeeping requirements for ventilation tests and examinations are the minimum necessary to ensure that mines are safe and adequately ventilated. Reduction in these requirements may result in unsafe conditions developing, thus jeopardizing miners. Section 101(a)(9) of the Mine Act prohibits the agency from reducing the protection given miners by any existing standard. The agency has clarified that once a ventilation plan is approved, the mine operator need only to submit the revised pages or sketches of the plan when proposing revisions unless the District Manager has requested, in writing, that a fully revised plan be submitted.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- **! requiring respondents to report information to the agency more often than quarterly;**
- **! requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
- **! requiring respondents to submit more than an original and two copies of any document;**
- **! requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;**
- **! in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
- **! requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
- **! that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
- **! requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

Ventilation system and methane and dust control plans are statutory requirements, some of which are required to be recorded and/or reported more frequently than quarterly.

8. If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 C.F.R. 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

In accordance with 5 C.F.R. 1320.8 (d), MSHA will publish the proposed information collection requirements in the Federal Register, notifying the public that these information collection requirements are being reviewed in accordance with the Paperwork Reduction Act of 1995, and giving interested persons 60 days to submit comments.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

MSHA has decided not to provide payments or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.

There is no assurance of confidentiality provided to respondents. Records are maintained by the mine operator and reviewed by MSHA inspectors during routine inspections.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons form whom the information is requested, and any steps to be taken to obtain their consent.

There are no questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.**

- **If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.**

- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included in Item 14.**

The following estimation of burden hours is based on MSHA's records and mine ventilation experience of Coal Mine Inspectors under the existing standards. There are approximately 612 underground coal mines (244 small mines and 368 medium or large mines) affected by this rule. MSHA's records show that on the average there is 1 fan, 1 working section and 1 shift per small mine and 1.5 fans, 2.5 working

sections and 2.5 shifts per large mine. There are an average of 200 working days in a small mine that works 40 weeks per year and 250 working days in a large mine that works 50 weeks per year. However, the burden hour estimates are based on the total number of weeks fans operate yearly, rather than on the average work weeks.

30 C.F.R. § 75.310 - Installation of Main Mine Fans. Each mine is required to be ventilated by one or more main mine fans. This section sets forth requirements and specifications for the installation of main mine fans. Section 75.310(a)(4) requires that each main mine fan be equipped with a pressure recording device, which may be a part of a fan monitoring system, and that the resulting records be maintained for one year. The record, a pressure recording chart, will be generated an average of 50 weeks per year at small mines and every week (52 weeks) at large mines. MSHA estimates that it takes 7 minutes (0.1166 hour) per week to generate and maintain the record for each fan. A miner earning $26.55 per hour typically performs this task.

Hour Burden

244 small mines x 1 fan x 50 weeks		
x 0.1166 hour	=	1,423 hours
368 large mines x 1.5 fans x 52 weeks		
x 0.1166 hour	=	3,347 hours
TOTALHour Burden	=	**4,770**

Hour Burden Cost

4,770 hours x $26.55 per hour	=	**$126,644**

30 C.F.R. § 75.312 - Main Mine Fan Examinations. Section 75.312(a) and (b) require that examinations be conducted daily on main mine fans not using a monitoring system to ensure electrical and mechanical reliability and every 7 days on main mine fans where monitoring systems are used. Fan examinations are not required on days when no one enters the mine. Although production may not occur, persons enter the mine for maintenance and examinations240 days per year at small mines and 365 days per year at large mines.

Where main mine fan monitoring systems are provided, 30 C.F.R. § 75.312(b) requires that data provided by the monitoring system be reviewed daily to ensure that the fan and monitoring system are operating properly. Reviews are not required on days when no one enters the mine. Although production may not occur, persons enter the mine for maintenance and examinations 240 days per year at small mines and 365 days per year at large mines. Section 75.312(b) also requires that the monitoring system be tested for proper operation and each main mine fan be examined every 7 days where monitoring systems are used.

Section 75.312(f)(1) requires that persons making main mine fan examinations certify by date and initials that the examinations were made. The fan examination and certification time is estimated at 15 minutes (0.25 hour). A miner earning $26.55 per hour typically performs this task. At the 368 large mines where fan monitoring systems are used, data from the system must be reviewed and certified daily, taking 5 minutes (0.0833 hours). Also, the 45 mines using monitoring systems must examine the fan once a week, taking 15 minutes (0.25 hours).

Hour Burden

244 small mines x 1 fan x 240 days		
x 0.25 hour (without monitoring systems)	=	14,640 hours
368 large mines (without monitoring systems)		
x 1.5 fans x 365 days x 0.25 hour	=	50,370 hours
45 large mines (with monitoring systems)		
x 1.5 fans x 365 days x 0.0833 hours	=	2,052 hours
45 large mines (with monitoring systems)		
x 1.5 fans x 52 weeks s x 0.25 hour	=	877 hours
TOTAL		**67,939 hours**

Hour Burden Cost

67,939 hours x $26.55 per hour	=	**$1,803,780**

Section 75.312(c) requires that the automatic fan signal device for each main mine fan be tested at least once every 31 days. Section 75.312(d) requires that automatic closing doors in multiple main mine fan systems be tested at least once every 31 days. The tests for 75.312(c) and (d) can be done concurrently with the testing process taking 15 minutes (0.25 hours). A record of these tests is required under 75.312(g)(3), taking 5 minutes (0.0833 hours) per mine, 12 times yearly. These tasks can be performed by a miner earning $26.55 per hour.

Hour Burden

Testing

244 small mines x 12 monthly tests		
x 0.25 hour	=	732 hours
368 large mines x 12 monthly tests		
x 0.25 hour	=	1,104 hours
TOTAL	=	1,836 hours

Hour Burden Cost

1,836 hours x $26.55	=	$48,746

Hour Burden

Recordkeeping

244 small mines x 12 monthly records		
x 0.0833 hour	=	244 hours
368 large mines x 12 monthly records		
x 0.0833 hour	=	368 hours
TOTAL	=	612 hours

Hour Burden Cost

612 hours x $26.55	=	$ 16,248

Section 75.312(g)(1) requires a record of uncorrected defects found during an examination. Estimated recordkeeping is 5 minutes (0.0833 hour) and MSHA estimates that 410 mines (137 small and 273 large mines) will have uncorrected defects requiring a record each month.

Hour Burden

137 small mines x 12 defects per year x 0.0833 hour	=	137 hours
273 large mines x 12 defects per year x 0.0833 hour	=	273 hours
TOTAL	=	410 hours

Hour Burden Cost

410 hours x $26.55	=	$ 10,886

Section 312(g)(2)(ii) requires that mines using monitoring systems to monitor fan pressure must make a record concerning monitoring system malfunctions and electrical or mechanical deficiencies, and any sudden increase or loss in mine ventilating pressure. The recordkeeping is estimated to take 10 minutes (0.1666 hour).

Hour Burden:
Recordkeeping

45 large mines (which use monitoring system) x 12 defects per year x 0.1666 hour	=	90 hours

Hour Burden Cost

90 hours x $26.55	=	$2,390

TOTAL Hour Burden	**=**	**70,887**
TOTAL Hour Burden Cost	**=**	**$1,882,050**

30 C.F.R .§75.342 - Methane Monitors. Operators must install MSHA approved methane monitors on all face cutting machines, continuous miners, longwall face equipment, loading machines, and other mechanized equipment used to extract or load coal within the working place. In addition, methane monitors must be maintained in permissible and proper operating condition and be calibrated with a known methane-air mixture at least once every 31 days. On average, a small mine maintains 1.5 monitors and a large mine, three monitors. Examination time related to calibration of each methane monitor is 20 minutes (0.3333 hour) per month. Under § 75.342(a)(4)(ii), operators are required to keep records of calibration tests. Records would be retained for one year from date of the test. Estimated time to make a record is 5 minutes (0.0833 hour) per month for recordkeeping for a small mine, and 8 minutes (0.1333 hours) for a large mine. The exam can be conducted and recorded by a certified/qualified electrician earning $26.55 per hour.

Burden Hours
Examinations

244 small mines x 1.5 methane monitors x 12 month x 0.3333 hour	=	1,464 hours
368 large mines x 3 methane monitors x 12 month x 0.3333 hour	=	4,416 hours

TOTAL	=	5,880 hours

Burden Hour Cost

5,880 hours x $26.55	=	$156,114

Burden Hour

Recordkeeping

244 small mines x 12 months x 0.0833 hour	=	244 hours
368 large mines x 12 months x 0.1333 hour	=	589 hours
TOTAL	=	833 hours

Burden Hour Cost

833 hours x $26.55	=	$22,116

TOTAL Burden Hours	**=**	**6,713**
TOTAL Burden Hour Cost	**=**	**$178,230**

30 C.F.R. §75.351(h) - Atmospheric Monitoring System. This section applies to mines (65 mines) performing monitoring which is permitted as an alternative compliance option in accordance with 75.323(d)(1)(ii), 75.340(a)(2), and 75.362(f). If an alarm is generated by the system, the rule requires that an examination be conducted to determine its cause, 75.351(d)(2), and a record must be made, 75.351(h). The recordkeeping burden has been estimated for 65 mines averaging 7 alarm activations annually. MSHA estimates that it will take 30 minutes (0.5 hour) for the examination and 2 minutes (0.033 hour) to make a record of the occurrence. Monthly calibration of each sensor is required by 75.351(f), typically taking 1 person one full shift (8 hours). The examination and record can be made by a miner earning $26.55 per hour.

Hour Burden

Examination:		
65 mines x 7 alarms x 0.5 hours	=	228 hours
Calibration:		
65 mines x 12 month x 8 hours	=	6,240 hours
Recordkeeping:		
65 mines x 7 alarms x 0.033 hours	=	15 hours
TOTAL Burden Hours	=	**6,483**

Hour Burden Cost

6,483 hours x $26.55		
TOTAL Burden Hour Cost	=	**$172,124**

30 C.F.R. §75.360 - Preshift Examinations. Examinations are required to be conducted within 3 hours prior to the beginning of each shift. The examination time is 3 hours in a large mine and 2 hours in a small mine, including required certification within examined areas by date, time, and initials. On average, a small mine will conduct 1.5 examinations per day while a large will conduct 2.5 examinations per day. Records are required to be made of the results of each preshift examination, any hazardous conditions and their locations that are encountered during the preshift examination. A record is also required to be made of the action taken to correct hazardous conditions found during the preshift examination. The recordkeeping activity is estimated to take about 30 minutes (0.50 hour) in a large mine and 15 minutes (0.25 hour) in a small mine. Examinations and records are typically performed by examiners earning $26.55 per hour. Countersigning by the mine foreman, earning $57.82 per hour, is

required and takes 5 minutes (0.0833 hours) for a small mine and 10 minutes (0.1666 hours) for a large mine daily.

Burden Hours

Examination:		
244 small mines x 1.5 exams x 200 days x 2 hours	=	146,400 hours
368 large mines x 2.5 exams x 250 days x 3 hours	=	690,000 hours
TOTAL	=	836,400 hours
Recordkeeping:		
244 small mines x 1.5 exams x 200 days x 0.25 hours	=	18,300 hours
368 large mines x 2.5 exams x 250 days x 0.5 hours	=	115,000 hours
TOTAL	=	133,300 hours
Countersigning:		
244 small mines x 200 days x 0.0833 hours	=	4,065 hours
368 large mines x 250 days x 0.1666 hours	=	15,327 hours
TOTAL	=	19,392 hours
TOTAL Burden Hours	**=**	**989,092**

Burden Hour Cost

Examination:		
836,400 hours x $26.55	=	$22,206,420
Recordkeeping:		
133,300 hours x $26.55	=	$3,539,115
Countersigning:		
19,392 hours x $57.82	=	$ 1,121,245
TOTALBurden Hour Cost	=	**$26,866,780**

30 C.F.R. §75.361 - Supplemental Examinations. The rule requires a certified person to make a supplemental examination for hazardous conditions before any person enters an area of the mine which has not been preshift examined. The examination time is estimated to take 30 minutes (0.5 hour). Within the examined area, the examiner is required to certify by date, time, and initials, that the examination was made. The time for certification is included in the examination time estimate. Records are not required under this section. If, however, a hazardous condition is found, a record would be required under 75.363.

Burden Hours

Examination Time:		
244 small mines x 4 exams per yr. x 0.50 hour	=	448 hours
368 large mines x 24 exams per yr. x 0.50 hour	=	4,416 hours
TOTAL Burden Hours	=	**4,864**

TOTAL Burden Hour Cost

4,864 hours x $26.55	=	**$129,139**

30 C.F.R. §75.362 - On-Shift Examinations. The recordkeeping requirement for this section has been transferred to 75.363 and applies if a hazardous condition is discovered during the examination.
At least once during each coal producing shift, or more often if necessary for safety, a certified person is required to conduct an on-shift examination of each section where anyone is assigned to work during the shift and any area where mechanized mining equipment is being installed or removed during the shift.

The certified person must check for hazardous conditions and test for methane and oxygen deficiency and determine if the air is moving in its proper direction. Also included is the examination of belt conveyor haulageways in which belts are operated. An examination to assure compliance with the respirable dust control parameters specified in the mine ventilation plan is required by 75.362(a)(2). The examination time is estimated to take 40 minutes (0.667 hour) at a small mine and 45 minutes (0.75 hour) at a large mine. The examination time estimate includes time for certification by date, time and initials, which is required under the rule. The examination is performed by the shift supervisor earning $57.82 per hour.

Burden Hours
Examination Time:

244 small mines x 1 working section x 1 shift		
x 200 days x 0.667 hours	=	32,550 hours
368 large mines x 2.3 working section		
x 2.5 shifts x 250 days x 0.75 hours	=	396,750 hours
TOTALBurden Hours	=	**429,300**

TOTAL Burden Hour Cost

429,300 hours x $57.82	=	**$24,822,126**

Section 75.363, Hazardous conditions; posting, correcting and recording. The rule requires a record of hazardous conditions found, including any found during 75.361 and 75.362 examinations, must be recorded along with corrective actions taken to abate the conditions. Also, under section 75.363, a record is required for mines for any hazardous conditions found during the examination after any unintentional fan stoppages lasting greater than 15 minutes. This record must be countersigned by the mine foreman. The time to record a hazard is estimated to be 5 minutes (0.0833 hour), and 3 minutes (0.05 hours) are needed to countersign the record. The record can be made by a person earning $26.55 per hour and signed by the mine foreman estimated to earn $57.82 per hour. It is estimated that 100 hazards per year will be recorded at large mines and 50 hazards per year will be recorded in small mines.

Burden Hours
Recordkeeping Time:

244 small mines x 50 hazards found per yr. x		
0.0833 hours	=	1,016 hours
368 large mines x 100 hazards found per yr. x		
0.0833 hour	=	3,065 hours
TOTAL	=	4,081 hours

Countersigning Time:

244 sm. mines x 50 hazards found per yr. x		
0.05 hours	=	610 hours
368 large mines x 100 hazards found per yr. x		
0.05 hour	=	1,840 hours
	=	2,450 hours
TOTAL Burden Hours	**=**	**6,531**

Burden Hour Cost
Recordkeeping

4,081 hours x $26.55	=	$108,350

Countersigning

2,450 hours x $57.82	=	$141,659
TOTAL Burden Hour Cost	=	**$250,009**

30 C.F.R. §75.364 - Weekly Examinations. The weekly examination time is estimated to be 5.1 hours in a small mine and 10.2 hours in a large mine. Included in this exam time is the time for taking weekly ventilation air measurements. Also included is time necessary for the examiner to certify that the examination was made by leaving date, time, and initials at locations within the examined area. The time required to make the record is estimated to be 35 minutes (0.58 hour) in a small mine and 60 minutes (1.0 hour) in a large mine. Records are completed by examiners earnings $26.55 per hour. The time needed to review and countersign the record by the mine foreman ($57.82 per hour) is 5 minutes (0.0833 hours) at a small mine and 10 minutes (0.1666 hours) at a large mine.

Burden Hours

Examination Time:		
244 small mines x 40 weeks x 5.1 hours	=	49,776 hours
368 large mines x 50 weeks x 10.2 hours	=	187,680 hours
		237,456 hours
Recordkeeping Time:		
244 small mines x 40 weeks x 0.58 hours	=	5,660 hours
368 large mines x 50 weeks x 1.0 hours	=	18,400 hours
		24,060 hours
Countersigning		
244 small mines x 40 weeks x 0.0833 hours	=	813 hours
368 large mines x 50 weeks x 0.1666 hours	=	3,065 hours
		3,878 hours
TOTALBurden Hours	=	**265,394**

Burden Hour Cost

Examination and Recordkeeping		
265,394 hours x $26.55	=	$7,046,210
Countersigning		
3,878 hours x $57.82	=	$ 224,225
TOTALBurden Hour Cost	=	**$7,270,435**

30 C.F.R. §75.370 - Mine Ventilation Plan Submission and Approval. The mine operator must submit a proposed ventilation plan in writing to the district manager for approval and that plan must be reviewed by both the mine operator and MSHA every six months. However, once a ventilation plan is approved, the operator needs to submit only the revised pages, sketches, and drawings of the plan when proposing revisions, unless the district manager requests in writing that the mine operator submit a new fully revised plan. The operator must update the plan as often as is necessary to ensure that the plan is suitable to current conditions in the mine.

The mine operator must notify the representative of the miners of any proposed and approved ventilation plan or plan revision, and upon request, provide a copy. In addition, 3 copies of the mine ventilation map must be submitted annually including supplemental information listed in 75.372 requiring one hour per copy. Plan updates and maps are prepared by a mine management professional earning $57.82 per hour and copying is performed by a clerical person earning $20.55 per hour. A large

mine will submit 4 updates requiring 16 hours and 3 maps requiring 1 hour each. (Note: A small mine will generally contract out for this service. The small mine operator will submit 2 updates annually requiring 4 hours and 3 maps requiring 1 hour each. Therefore, this is included in paragraph 13 below as a cost estimate.)

Burden Hours

Recordkeeping:		
Plan updates:		
368 large mines x 16 hours x 4 updates	=	23,552 hours
Ventilation Map:		
368large mines x 3 maps x 1 hour per map	=	1,104 hours
Copying:		
368 large mines x 0.5 hours x 4 updates	=	736 hours
TOTAL Burden Hours	=	**25,392**

Burden Hour Costs

Updates and Maps		
24,656 hours x $57.82	=	$1,425,609
Copying		
736 hours x $20.55	=	$ 15,124
TOTALBurden Hour Costs	=	**$1,440,733**

Sections 75.371(r), (kk), (ll), (mm), (nn), (oo), and (pp) provide that certain information required in §§ 75.325 and 70.1900 be recorded in the mine operator's ventilation plan required by existing § 75.370. MSHA estimates that the time required to record the additional information in the existing ventilation plan will be 20 minutes (0.3333 hours) in a large mine and 10 minutes (0.1667 hours) in a small mine. The information is recorded by a mine supervisor earning $57.82 per hour.

Recordkeeping Burden Hours in Existing § 75.370:

65 large mines x (0.3333 hour)	=	22 hours
46 small mines x (0.1667 hour)	=	8 hours
TOTAL Burden Hours	**=**	**30 hours**

Recordkeeping Burden Hour Costs in Existing § 75.370

22 hours x $57.82 wage	=	$ 1,272
8 hours x $57.82 wage	=	$ 463
TOTAL Burden Hour Cost	**=**	**$ 1,735**

75.382 Mechanical Escape facilities

Section 75.382(c) requires that mines employing mechanical escape facilities must conduct a weekly examination to assure that the facility is in proper operating condition. Section 75.382(g) requires that the examiner certify by date, time, and initials, that the examination was conducted. It is estimated that 300 such facilities are in use at large mines operating 50 weeks per year and that the weekly examination, including certification, will take 1 hour. The examination can be conducted by a miner at $26.55 per hour.

Burden Hours

300 facilities x 1 hour x 50 weeks	=	**15,000 hours**

Burden Hour Cost

15,000 hours x $26.55 = **$398,250**

SUMMARY

30 C.F.R. Section	Burden Hours	Burden Hour Cost
75.310	4,770	$ 126,644
75.312	70,887	$ 1,882,050
75.342	6,713	$ 178,230
75.351(h)	6,483	$ 172,124
75.360	989,092	$ 26,866,780
75.361	4,864	$ 129,139
75.362	429,300	$ 24,822,126
75.363	6,531	$ 250,009
75.364	265,394	$ 7,270,435
75.370	25,392	$ 1,440,733
75.371	30	$1,735
75.382	15,000	$ 398,250
TOTAL	**1,824,456**	**$63,538,255**

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).

- **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**

- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**

- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with**

requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.

Section 75.363 To make the record of sampling results required by § 75.363, mine operators are required to purchase instantaneous gas analyzers that cost about $2,000 per instrument; however, all existing mines have obtained these devices. To account for new mines which will have to purchase these devices, an average life of 5 years for large mines and an average life for small mines of two years is used to estimate that 7 large mines will start-up annually and 23 small mines will open per year. The large mines will have two analyzers and the small mines will require one unit. The sampling devices will last 10 years, and costs are therefore annualized at 0.142. The devices need to be maintained and calibrated at a cost of $780 per year.

Annualized Equipment Costs For Large Mines:		
$2,000 x 7 large mines x 2 analyzers x 0.142	=	$ 3,976
Annual Calibration Costs For Large Mines:		
$780 x 2 analyzers x 7 large mines	=	$ 10,920
Annualized Equipment Costs For Small Mines:		
$2,000 x 23 small mines x 1 analyzer x 0.142	=	$ 6,532
Annual Calibration Costs For Small Mines:		
$780 x 1 analyzer x 23 small mines	=	$ 17,940
		$ 39,368

The mine operator must submit a proposed ventilation plan in writing to the district manager for approval and that plan must be reviewed by both the mine operator and MSHA every six months. However, once a ventilation plan is approved, the operator needs to submit only the revised pages, sketches, and drawings of the plan when proposing revisions, unless the district manager requests in writing that the mine operator submit a new fully revised plan. The operator must update the plan as often as is necessary to ensure that the plan is suitable to current conditions in the mine.

A small mine will generally contract out for this service. The small mine operator will submit 2 updates annually requiring 4 hours and 3 maps requiring 1 hour each. Using the same burden hour concept utilized for large mines the following burden cost is estimated for small mine operators as follows:

Cost Estimate:

Recordkeeping:		
Plan updates:		
244 small mines x 4 hours x 2 updates	=	1,952 hours
Ventilation Map:		
244 small mines x 3 maps x 1 hour per map	=	732 hours
TOTAL	=	2,684 hours
Copying:		
244 small mines x 0.5 hours x 2 updates	=	244 hours

Burden Hour Costs		
Updates and Maps 2,684 hours x $57.82	=	$155,189

Copying		
244 hours x $20.55	=	$ 5,014
TOTAL COST	=	**$160,203**

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include number of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

The review/inspection of ventilation plans, test results and examination in underground mines is just one aspect of the annual inspection. Complete inspections are required under section 103(a) of the Mine Act and are required 4 times a year for underground mines. The average time required to finish a complete inspection is 92.5 hours, and the average grade and salary of a mine inspector is GS 12/5, at $30.06 per hour.

The recurring cost to the Federal Government each year is as follows: There are 612 active mines of which 244 are small mines and 368 are medium/large mines. It is estimated that small mines will average 3 revisions, or supplements (including the ventilation map) each year and large mines will average 5 revisions, or supplements (including the ventilation map). On average MSHA personnel will take 3 hours to review submission. The recurring cost to the Federal Government is estimated as follows:

Reviews by MSHA:		
244 x 3 revisions x 3 hours/revision x $30.06 hour	=	$ 66,012
368 x 5 revisions x 3 hours/revision x $30.06 hour	=	$165,931
		$231,943

15. Explain the reasons for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-I.

Respondents: There has been a decrease in the number of Respondents (711 to 612). This is due to a decrease in the number of underground coal mines.

Responses: There has been a decrease of 300,162 in the number of responses (2,144,014 to 1,843,852), due to the decrease in the number of underground coal mines.

Hours: There was a decrease of 244,383 hours (2,068,839 to 1,824,456). The decrease in the number of mines has a direct reflection on the number of hours.

Costs: There has been a decrease of $30K ($190K to $160K). This again, is due to the number of mines decreasing.

16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

MSHA does not intend to publish the results of this information collection.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

There are no forms associated with this information collection; therefore, MSHA is not seeking approval to not display the expiration date for OMB approval of this information collection.

18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.

There are no certification exceptions identified with this information collection.

Federal Mine Safety & Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164*

An Act

MANDATORY SAFETY AND HEALTH STANDARDS

SEC. 101. (a) The Secretary shall by rule in accordance with procedures set forth in this section and in accordance with section 553 of title 5, United States Code (without regard to any reference in such section to sections 556 and 557 of such title), develop, promulgate, and revise as may be appropriate, improved mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines.

VENTILATION

SEC. 303. (a) All coal mines shall be ventilated by mechanical ventilation equipment installed and operated in a manner approved by an authorized representative of the Secretary and such equipment shall be examined daily and a record shall be kept of such examination.

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[Title 30, Volume 1]
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Sec. 75.310 Installation of main mine fans.

(a) Each main mine fan shall be--

(1) Installed on the surface in an incombustible housing;

(2) Connected to the mine opening with incombustible air ducts;

(3) Equipped with an automatic device that gives a signal at the mine when the fan either slows or stops. A responsible person designated by the operator shall always be at a surface location at the mine where the signal can be seen or heard while anyone is underground. This person shall be provided with two-way communication with the working sections and work stations where persons are routinely assigned to work for the majority of a shift;

(4) Equipped with a pressure recording device or system. Mines permitted to shut down main mine fans under Sec. 75.311 and which do not have a pressure recording device installed on main mine fans shall have until June 10, 1997 to install a pressure recording device or system on all main mine fans. If a device or system other than a circular pressure recorder is used to monitor main mine fan pressure, the monitoring device or system shall provide a continuous graph or continuous chart of the pressure as a function of time. At not more than 7-day intervals, a hard copy of the continuous graph or chart shall be generated or the record of the fan pressure shall be stored electronically. When records of fan pressure are stored electronically, the system used to store these records shall be secure and not susceptible to alteration and shall be capable of storing the required data. Records of the fan pressure shall be retained at a surface location at the mine for at least 1 year and be made available for inspection by authorized representatives of the Secretary and the representative of miners;

(5) Protected by one or more weak walls or explosion doors, or a combination of weak walls and explosion doors, located in direct line with possible explosive forces;

(6) Except as provided under paragraph (e) of this section, offset by at least 15 feet from the nearest side of the mine opening unless an alternative method of protecting the fan and its associated components is approved in the ventilation plan.

(b)(1) If an electric motor is used to drive a main mine fan, the motor shall operate from a power circuit independent of all mine power circuits.

(2) If an internal combustion engine is used to drive a main mine fan--

(i) The fuel supply shall be protected against fires and explosions;
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(ii) The engine shall be installed in an incombustible housing and be equipped with a remote shut-down device;

(iii) The engine and the engine exhaust system shall be located out of direct line of the air current exhausting from the mine; and

(iv) The engine exhaust shall be vented to the atmosphere so that the exhaust gases do not contaminate the mine intake air current or any enclosure.

(c) If a main mine fan monitoring system is used under Sec. 75.312, the system shall--

(1) Record, as described in paragraph (a)(4) the mine ventilating pressure;

(2) Monitor bearing temperature, revolutions per minute, vibration, electric voltage, and amperage;

(3) Provide a printout of the monitored parameters, including the mine ventilating pressure within a reasonable period, not to exceed the end of the next scheduled shift during which miners are underground; and

(4) Be equipped with an automatic device that signals when--

(i) An electrical or mechanical deficiency exists in the monitoring system; or

(ii) A sudden increase or loss in mine ventilating pressure occurs.

(5) Provide monitoring, records, printouts, and signals required by paragraphs (c)(1) through (c)(4) at a surface location at the mine where a responsible person designated by the operator is always on duty and where signals from the monitoring system can be seen or heard while anyone is underground. This person shall be provided with two-way communication with the working sections and work stations where persons are routinely assigned to work for the majority of a shift.

(d) Weak walls and explosion doors shall have cross-sectional areas at least equal to that of the entry through which the pressure from an explosion underground would be relieved. A weak wall and explosion door combination shall have a total cross-sectional area at least equal to that of the entry through which the pressure from an explosion underground would be relieved.

(e) If a mine fan is installed in line with an entry, a slope, or a shaft--

(1) The cross-sectional area of the pressure relief entry shall be at least equal to that of the fan entry;

(2) The fan entry shall be developed out of direct line with possible explosive forces;

(3) The coal or other solid material between the pressure relief entry and the fan entry shall be at least 2,500 square feet; and

(4) The surface opening of the pressure relief entry shall be not less than 15 feet nor more than 100 feet from the surface opening of the fan entry and from the underground intersection of the fan entry and pressure relief entry.

(f) In mines ventilated by multiple main mine fans, incombustible doors shall be installed so that if any main mine fan stops and air reversals through the fan are possible, the doors on the affected fan automatically close.

[61 FR 9829, Mar. 11, 1996, as amended at 61 FR 20877, May 8, 1996]

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Subpart D_Ventilation

Sec. 75.312 Main mine fan examinations and records.

(a) To assure electrical and mechanical reliability of main mine fans, each main mine fan and its associated components, including devices for measuring or recording mine ventilation pressure, shall be examined for proper operation by a trained person designated by the operator. Examinations of main mine fans shall be made at least once each day that the fan operates, unless a fan monitoring system is used. No examination is required on any day when no one, including certified persons, goes underground, except that an examination shall be completed prior to anyone entering the mine.

(b)(1) If a main mine fan monitoring system is used, a trained person designated by the operator shall--

(i) At least once each day review the data provided by the fan monitoring system to assure that the fan and the fan monitoring system are operating properly. No review is required on any day when no one, including certified persons, goes underground, except that a review of the data shall be performed prior to anyone entering the underground portion of the mine. Data reviewed should include the fan pressure, bearing temperature, revolutions per minute, vibration, electric voltage, and amperage; and

(ii) At least every 7 days--

(A) Test the monitoring system for proper operation; and

(B) Examine each main mine fan and its associated components to assure electrical and mechanical reliability of main mine fans.

(2) If the monitoring system malfunctions, the malfunction shall be corrected, or paragraph (a) of this section shall apply.

(c) At least every 31 days, the automatic fan signal device for each main mine fan shall be tested by stopping the fan. Only persons necessary to evaluate the effect of the fan stoppage or restart, or to perform maintenance or repair work that cannot otherwise be made while the fan is operating, shall be permitted underground. Notwithstanding the requirement of Sec. 75.311(b)(3), underground power may remain energized during this test provided no one, including persons identified in Sec. 75.311(b)(1), is underground. If the fan is not restarted within 15 minutes, underground power shall be deenergized and no one shall enter any underground area of the mine until the fan is restarted and an examination of the mine is conducted as described in Sec. 75.360 (b) through (e) and the mine has been determined to be safe.

(d) At least every 31 days, the automatic closing doors in multiple

main mine fan systems shall be tested by stopping the fan. Only persons necessary to evaluate the effect of the fan stoppage or restart, or to perform maintenance or repair work that cannot otherwise be made while the fan is operating, shall be permitted underground. Notwithstanding the provisions of Sec. 75.311, underground power may remain energized during this test provided no one, including persons
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identified in Sec. 75.311(b)(1), is underground. If the fan is not restarted within 15 minutes, underground power shall be deenergized and no one shall enter any underground area of the mine, until the fan is restarted and an examination of the mine is conducted as described in Sec. 75.360 (b) through (e) and the mine has been determined to be safe.

(e) Circular main mine fan pressure recording charts shall be changed before the beginning of a second revolution.

(f)(1) Certification. Persons making main mine fan examinations shall certify by initials and date at the fan or another location specified by the operator that the examinations were made. Each certification shall identify the main mine fan examined.

(2) Persons reviewing data produced by a main mine fan monitoring system shall certify by initials and date on a printed copy of the data from the system that the review was completed. In lieu of certification on a copy of the data, the person reviewing the data may certify electronically that the review was completed. Electronic certification shall be by handwritten initials and date in a computer system so as to be secure and not susceptible to alteration.

(g)(1) Recordkeeping. By the end of the shift on which the examination is made, persons making main mine fan examinations shall record all uncorrected defects that may affect the operation of the fan that are not corrected by the end of that shift. Records shall be maintained in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(2) When a fan monitoring system is used in lieu of the daily fan examination--

(i) The certified copies of data produced by fan monitoring systems shall be maintained separate from other computer-generated reports or data; and

(ii) A record shall be made of any fan monitoring system malfunctions, electrical or mechanical deficiencies in the monitoring system and any sudden increase or loss in mine ventilating pressure. The record shall be made by the end of the shift on which the review of the data is completed and shall be maintained in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(3) By the end of the shift on which the monthly test of the automatic fan signal device or the automatic closing doors is completed, persons making these tests shall record the results of the tests. Records shall be maintained in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(h) Retention period. Records, including records of mine fan pressure and the certified copies of data produced by fan monitoring systems, shall be retained at a surface location at the mine for at least 1 year and shall be made available for inspection by authorized representatives of the Secretary and the representative of miners.

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Sec. 75.342 Methane monitors.

(a)(1) MSHA approved methane monitors shall be installed on all face cutting machines, continuous miners, longwall face equipment, loading machines, and other mechanized equipment used to extract or load coal within the working place.

(2) The sensing device for methane monitors on longwall shearing machines shall be installed at the return air end of the longwall face. An additional sensing device also shall be installed on the longwall shearing machine, downwind and as close to the cutting head as practicable. An alternative location or locations for the sensing device required on the longwall shearing machine may be approved in the ventilation plan.

(3) The sensing devices of methane monitors shall be installed as close to the working face as practicable.

(4) Methane monitors shall be maintained in permissible and proper operating condition and shall be calibrated with a known air-methane mixture at least once every 31 days. To assure that methane monitors are properly maintained and calibrated, the operator shall:

(i) Use persons properly trained in the maintenance, calibration, and permissibility of methane monitors to calibrate and maintain the devices.

(ii) Maintain a record of all calibration tests of methane monitors. Records shall be maintained in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(iii) Retain the record of calibration tests for 1 year from the date of the test. Records shall be retained at a surface location at the mine and made available for inspection by authorized representatives of the Secretary and the representative of miners.

(b)(1) When the methane concentration at any methane monitor reaches 1.0 percent the monitor shall give a warning signal.

(2) The warning signal device of the methane monitor shall be visible to a person who can deenergize electric equipment or shut down diesel-powered equipment on which the monitor is mounted.

(c) The methane monitor shall automatically deenergize electric equipment or shut down diesel-powered equipment on which it is mounted when--

(1) The methane concentration at any methane monitor reaches 2.0 percent; or

(2) The monitor is not operating properly.

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Subpart D_Ventilation

Sec. 75.351 Atmospheric monitoring systems.

(a) AMS operation. Whenever personnel are underground and an AMS is used to fulfill the requirements of Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the AMS must be operating and a designated AMS operator must be on duty at a location on the surface of the mine where audible and visual signals from the AMS must be seen or heard and the AMS operator can promptly respond to these signals.

(b) Designated surface location and AMS operator. When an AMS is used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), the following requirements apply:

(1) The mine operator must designate a surface location at the mine where signals from the AMS will be received and two-way voice communication is maintained with each working section, with areas where mechanized mining equipment is being installed or removed, and with other areas designated in the approved emergency evacuation and firefighting program of instruction (Sec. 75.1502).

(2) The mine operator must designate an AMS operator to monitor and promptly respond to all AMS signals.

(3) A map or schematic must be provided at the designated surface location that shows the locations and type of AMS sensor at each location, and the intended air flow direction at these locations. This map or schematic must be updated within 24 hours of any change in this information.

(4) The names of the designated AMS operators and other appropriate personnel, including the designated person responsible for initiating an emergency mine evacuation under Sec. 75.1501, and the method to contact these persons, must be provided at the designated surface location.

(c) Minimum operating requirements. AMSs used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f) must:

(1) Automatically provide visual and audible signals at the designated surface location for any interruption of circuit continuity and any electrical malfunction of the system. These signals must be of sufficient magnitude to be seen or heard by the AMS operator.

(2) Automatically provide visual and audible signals at the designated surface location when the carbon monoxide concentration or

methane concentration at any sensor reaches the alert level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude to be seen or heard by the AMS operator.

(3) Automatically provide visual and audible signals at the designated surface location distinguishable from alert signals when the

carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude
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to be seen or heard by the AMS operator.

(4) Automatically provide visual and audible signals at all affected working sections and at all affected areas where mechanized mining equipment is being installed or removed when the carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be of sufficient magnitude to be seen or heard by miners working at these locations. Methane signals must be distinguishable from other signals.

(5) Automatically provide visual and audible signals at other locations as specified in Mine Emergency Evacuation and Firefighting Program of Instruction (Sec. 75.1502) when the carbon monoxide, smoke, or methane concentration at any sensor reaches the alarm level as specified in Sec. 75.351(i). These signals must be seen or heard by miners working at these locations. Methane alarms must be distinguishable from other signals.

(6) Identify at the designated surface location the operational status of all sensors.

(7) Automatically provide visual and audible alarm signals at the designated surface location, at all affected working sections, and at all affected areas where mechanized mining equipment is being installed or removed when the carbon monoxide level at any two consecutive sensors alert at the same time. These signals must be seen or heard by the AMS operator and miners working at these locations.

(d) Location and installation of AMS sensors. (1) All AMS sensors, as specified in Sec. Sec. 75.351(e) through 75.351(h), must be located such that measurements are representative of the mine atmosphere in these locations.

(2) Carbon monoxide or smoke sensors must be installed near the center in the upper third of the entry, in a location that does not expose personnel working on the system to unsafe conditions. Sensors must not be located in abnormally high areas or in other locations where air flow patterns do not permit products of combustion to be carried to the sensors.

(3) Methane sensors must be installed near the center of the entry, at least 12 inches from the roof, ribs, and floor, in a location that would not expose personnel working on the system to unsafe conditions.

(e) Location of sensors--belt air course. In addition to the requirements of paragraph (d) of this section, any AMS used to monitor belt air courses under Sec. 75.350(b) must have sensors to monitor for carbon monoxide or smoke at the following locations:

(1) At or near the working section belt tailpiece in the air stream ventilating the belt entry. In longwall mining systems the sensor must be located upwind in the belt entry at a distance no greater than 150 feet from the mixing point where intake air is mixed with the belt air

at or near the tailpiece;

(2) Upwind, a distance no greater than 50 feet from the point where the belt air course is combined with another air course or splits into multiple air courses;

(3) At intervals not to exceed 1,000 feet along each belt entry in areas where air velocities are maintained at 50 feet per minute or higher. In areas along each belt entry where air velocities are less than 50 feet per minute, the sensor spacing must not exceed 350 feet.

All sensors must be installed at the 1,000-foot spacing no later than August 2, 2004.

(4) Not more than 100 feet downwind of each belt drive unit, each tailpiece transfer point, and each belt take-up. If the belt drive, tailpiece, and/or take-up for a single transfer point are installed together in the same air course they may be monitored with one sensor located not more than 100 feet downwind of the last component; and

(5) At other locations in any entry that is part of the belt air course as required and specified in the mine ventilation plan.

(f) Locations of sensors--the primary escapeway. When used to monitor the primary escapeway under Sec. 75.350(b)(4), carbon monoxide or smoke sensors must be located in the primary escapeway within 500 feet of the working section and areas where mechanized mining equipment is being installed or removed. In addition, another sensor must be located within 500 feet inby the beginning of the panel.
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The point-feed sensor required by Sec. 75.350(d)(1) may be used as the sensor at the beginning of the panel if it is located within 500 feet inby the beginning of the panel.

(g) Location of sensors--return air splits. (1) If used to monitor return air splits under Sec. 75.362(f), a methane sensor must be installed in the return air split between the last working place, longwall or shortwall face ventilated by that air split, and the junction of the return air split with another air split, seal, or worked out area.

(2) If used to monitor a return air split under Sec. 75.323(d)(1)(ii), the methane sensors must be installed at the following locations:

(i) In the return air course opposite the section loading point, or, if exhausting auxiliary fan(s) are used, in the return air course no closer than 300 feet downwind from the fan exhaust and at a point opposite or immediately outby the section loading point; and

(ii) Immediately upwind from the location where the return air split meets another air split or immediately upwind of the location where an air split is used to ventilate seals or worked-out areas.

(h) Location of sensors--electrical installations. When monitoring the intake air ventilating underground transformer stations, battery charging stations, substations, rectifiers, or water pumps under Sec. 75.340(a)(1)(ii) or Sec. 75.340(a)(2)(ii), at least one sensor must be installed to monitor the mine atmosphere for carbon monoxide or smoke, located downwind and not greater than 50 feet from the electrical installation being monitored.

(i) Establishing alert and alarm levels. An AMS installed in accordance with the following paragraphs must initiate alert and alarm signals at the specified levels, as indicated:

(1) For Sec. 75.323(d)(1)(ii) alarm at 1.5% methane.

(2) For Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), and 75.350(d), alert at 5 ppm carbon monoxide above the ambient level and alarm at 10 ppm carbon monoxide above the ambient level when carbon monoxide sensors are used; and alarm at a smoke optical density of 0.022 per meter when smoke sensors are used. Reduced alert and alarm settings approved by the district manager may be required for carbon monoxide sensors identified in the mine ventilation plan, Sec. 75.371(nn).

(3) For Sec. 75.362(f), alert at 1.0% methane and alarm at 1.5% methane.

(j) Establishing carbon monoxide ambient levels. Carbon monoxide

ambient levels and the means to determine these levels must be approved in the mine ventilation plan (Sec. 75.371(hh)) for monitors installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), and 75.350(d).

(k) Installation and maintenance. An AMS installed in accordance with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f) must be installed and maintained by personnel trained in the installation and maintenance of the system. The system must be maintained in proper operating condition.

(l) Sensors. Sensors used to monitor for carbon monoxide, methane, and smoke must be either of a type listed and installed in accordance with the recommendations of a nationally recognized testing laboratory approved by the Secretary; or these sensors must be of a type, and installed in a manner, approved by the Secretary.

(m) Time delays. When a demonstrated need exists, time delays may be incorporated into the AMS. These time delays must only be used to account for non-fire related carbon monoxide alert and alarm sensor signals. These time delays are limited to no more than three minutes. The use and length of any time delays, or other techniques or methods which eliminate or reduce the need for time delays, must be specified and approved in the mine ventilation plan.

(n) Examination, testing, and calibration. (1) At least once each shift when belts are operated as part of a production shift, sensors used to detect carbon monoxide or smoke in accordance with Sec. Sec. 75.350(b), and 75.350(d), and alarms installed in accordance with Sec. 75.350(b) must be visually examined.

(2) At least once every seven days, alarms for AMS installed in accordance with Sec. Sec. 75.350(b), and 75.350(d) must be functionally tested for proper operation.
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(3) At intervals not to exceed 31 days--

(i) Each carbon monoxide sensor installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), or 75.350(d) must be calibrated in accordance with the manufacturer's calibration specifications. Calibration must be done with a known concentration of carbon monoxide in air sufficient to activate the alarm;

(ii) Each smoke sensor installed in accordance with Sec. Sec. 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), or 75.350(d) must be functionally tested in accordance with the manufacturer's calibration specifications;

(iii) Each methane sensor installed in accordance with Sec. Sec. 75.323(d)(1)(ii) or 75.362(f) must be calibrated in accordance with the manufacturer's calibration specifications. Calibration must be done with a known concentration of methane in air sufficient to activate an alarm.

(iv) If the alert or alarm signals will be activated during calibration of sensors, the AMS operator must be notified prior to and upon completion of calibration. The AMS operator must notify miners on affected working sections, areas where mechanized mining equipment is being installed or removed, or other areas designated in the approved emergency evacuation and firefighting program of instruction (Sec. 75.1502) when calibration will activate alarms and when calibration is completed.

(4) Gases used for the testing and calibration of AMS sensors must be traceable to the National Institute of Standards and Technology reference standard for the specific gas. When these reference standards are not available for a specific gas, calibration gases must be

traceable to an analytical standard which is prepared using a method traceable to the National Institute of Standards and Technology. Calibration gases must be within <PLUS-MINUS2.0 percent of the indicated gas concentration.

(o) Recordkeeping. (1) When an AMS is used to comply with Sec. Sec. 75.323(d)(1)(ii), 75.340(a)(1)(ii), 75.340(a)(2)(ii), 75.350(b), 75.350(d), or 75.362(f), individuals designated by the operator must make the following records by the end of the shift in which the following event(s) occur:

(i) If an alert or alarm signal occurs, a record of the date, time, location and type of sensor, and the cause for the activation.

(ii) If an AMS malfunctions, a record of the date, the extent and cause of the malfunction, and the corrective action taken to return the system to proper operation.

(iii) A record of the seven-day tests of alert and alarm signals; calibrations; and maintenance of the AMS must be made by the person(s) performing these actions.

(2) The person entering the record must include their name, date, and signature in the record.

(3) The records required by this section must be kept either in a secure book that is not susceptible to alteration, or electronically in a computer system that is secure and not susceptible to alteration. These records must be maintained separately from other records and identifiable by a title, such as the `AMS log.'

(p) Retention period. Records must be retained for at least one year at a surface location at the mine and made available for inspection by miners and authorized representatives of the Secretary.

(q) Training. All AMS operators must be trained annually in the proper operation of the AMS. A record of the content of training, the person conducting the training, and the date the training was conducted, must be maintained at the mine for at least one year by the mine operator.

(r) Communications. When an AMS is used to comply with Sec. 75.350(b), a two-way voice communication system required by Sec. 75.1600 must be installed in an entry that is separate from the entry in which the AMS is installed no later than August 2, 2004. The two-way voice communication system may be installed in the entry where the intake sensors required by Sec. Sec. 75.350(b)(4) or 75.350(d)(1) are installed.

[69 FR 17527, Apr. 2, 2004]
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Sec. 75.360 Preshift examination at fixed intervals.

(a)(1) Except as provided in paragraph (a)(2) of this section, a certified person designated by the operator must make a preshift examination within 3 hours preceding the beginning of any 8-hour interval during which any person is scheduled to work or travel underground. No person other than certified examiners may enter or remain in any underground area unless a preshift examination has been completed for the established 8-hour interval. The operator must establish 8-hour intervals of time subject to the required preshift examinations.

(2) Preshift examinations of areas where pumpers are scheduled to work or travel shall not be required prior to the pumper entering the areas if the pumper is a certified person and the pumper conducts an examination for hazardous conditions, tests for methane and oxygen deficiency and determines if the air is moving in its proper direction in the area where the pumper works or travels. The examination of the area must be completed before the pumper performs any other work. A record of all hazardous conditions found by the pumper shall be made and retained in accordance with Sec. 75.363.

(b) The person conducting the preshift examination shall examine for hazardous conditions, test for methane and oxygen deficiency, and determine if the air is moving in its proper direction at the following locations:

(1) Roadways, travelways and track haulageways where persons are scheduled, prior to the beginning of the preshift examination, to work or travel during the oncoming shift.

(2) Belt conveyors that will be used to transport persons during the oncoming shift and the entries in which these belt conveyors are located.

(3) Working sections and areas where mechanized mining equipment is being installed or removed, if anyone is scheduled to work on the section or in the area during the oncoming shift. The scope of the examination shall include the working places, approaches to worked-out areas and ventilation controls on these sections and in these areas, and the examination shall include tests of the roof, face and rib conditions on these sections and in these areas.

(4) Approaches to worked-out areas along intake air courses and at the entries used to carry air into worked-out areas if the intake air passing the approaches is used to ventilate working sections where anyone is scheduled to work during the oncoming shift. The examination of the approaches to the worked-out areas shall be made in the intake air course immediately inby and outby each entry used to carry air into

the worked-out area. An examination of the entries used to carry air into the worked-out areas shall be conducted at a point immediately inby the intersection of each entry with the intake air course.

(5) Seals along intake air courses where intake air passes by a seal to ventilate working sections where anyone is scheduled to work during the oncoming shift.

(6)(i) Entries and rooms developed after November 15, 1992, and developed more than 2 crosscuts off an intake air course without permanent ventilation controls where intake air passes through or by these entries or rooms to reach a working section where anyone is scheduled to work during the oncoming shift; and,

(ii) Entries and rooms developed after November 15, 1992, and driven more than 20 feet off an intake air course without a crosscut and without permanent ventilation controls where intake air passes through or by these entries or rooms to reach a working section where anyone is scheduled to work during the oncoming shift.

(7) Areas where trolley wires or trolley feeder wires are to be or will remain energized during the oncoming shift.

(8) High spots along intake air courses where methane is likely to accumulate, if equipment will be operated in the area during the shift.

(9) Underground electrical installations referred to in Sec. 75.340(a), except those pumps listed in Sec. 75.340 (b)(2) through (b)(6), and areas where compressors subject to Sec. 75.344 are installed if the electrical installation or compressor is or will be energized during the shift.

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(10) Other areas where work or travel during the oncoming shift is scheduled prior to the beginning of the preshift examination.

(c) The person conducting the preshift examination shall determine the volume of air entering each of the following areas if anyone is scheduled to work in the areas during the oncoming shift:

(1) In the last open crosscut of each set of entries or rooms on each working section and areas where mechanized mining equipment is being installed or removed. The last open crosscut is the crosscut in the line of pillars containing the permanent stoppings that separate the intake air courses and the return air courses.

(2) On each longwall or shortwall in the intake entry or entries at the intake end of the longwall or shortwall face immediately outby the face and the velocity of air at each end of the face at the locations specified in the approved ventilation plan.

(3) At the intake end of any pillar line--

(i) If a single split of air is used, in the intake entry furthest from the return air course, immediately outby the first open crosscut outby the line of pillars being mined; or

(ii) If a split system is used, in the intake entries of each split immediately inby the split point.

(d) The district manager may require the certified person to examine other areas of the mine or examine for other hazards during the preshift examination.

(e) Certification. At each working place examined, the person doing the preshift examination shall certify by initials, date, and the time, that the examination was made. In areas required to be examined outby a working section, the certified person shall certify by initials, date, and the time at enough locations to show that the entire area has been examined.

(f) Recordkeeping. A record of the results of each preshift

examination, including a record of hazardous conditions and their locations found by the examiner during each examination and of the results and locations of air and methane measurements, shall be made on the surface before any persons, other than certified persons conducting examinations required by this subpart, enter any underground area of the mine. The results of methane tests shall be recorded as the percentage of methane measured by the examiner. The record shall be made by the certified person who made the examination or by a person designated by the operator. If the record is made by someone other than the examiner, the examiner shall verify the record by initials and date by or at the end of the shift for which the examination was made. A record shall also be made by a certified person of the action taken to correct hazardous conditions found during the preshift examination. All preshift and corrective action records shall be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman's or equivalent mine official's next regularly scheduled working shift. The records required by this section shall be made in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(g) Retention period. Records shall be retained at a surface location at the mine for at least 1 year and shall be made available for inspection by authorized representatives of the Secretary and the representative of miners.

[61 FR 9829, Mar. 11, 1996, as amended at 61 FR 55527, Oct. 25, 1996; 62 FR 35085, June 30, 1997; 64 FR 45170, Aug. 19, 1999]

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Sec. 75.361 Supplemental examination.

(a) Except for certified persons conducting examinations required by this subpart, within 3 hours before anyone enters an area in which a preshift examination has not been made for that shift, a certified person shall examine the area for hazardous conditions, determine whether the air is traveling in its proper direction and at its normal volume, and test for methane and oxygen deficiency.

(b) Certification. At each working place examined, the person making the supplemental examination shall certify by initials, date, and the time, that the examination was made. In areas required to be examined outby a working

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section, the certified person shall certify by initials, date, and the time at enough locations to show that the entire area has been examined.

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Sec. 75.362 On-shift examination.

(a) (1) At least once during each shift, or more often if necessary for safety, a certified person designated by the operator shall conduct an on-shift examination of each section where anyone is assigned to work during the shift and any area where mechanized mining equipment is being installed or removed during the shift. The certified person shall check for hazardous conditions, test for methane and oxygen deficiency, and determine if the air is moving in its proper direction.

(2) A person designated by the operator shall conduct an examination to assure compliance with the respirable dust control parameters specified in the mine ventilation plan. In those instances when a shift change is accomplished without an interruption in production on a section, the examination shall be made anytime within 1 hour of the shift change. In those instances when there is an interruption in production during the shift change, the examination shall be made before production begins on a section. Deficiencies in dust controls shall be corrected before production begins or resumes. The examination shall include air quantities and velocities, water pressures and flow rates, excessive leakage in the water delivery system, water spray numbers and orientations, section ventilation and control device placement, and any other dust suppression measures required by the ventilation plan. Measurements of the air velocity and quantity, water pressure and flow rates are not required if continuous monitoring of these controls is used and indicates that the dust controls are functioning properly.

(b) During each shift that coal is produced, a certified person shall examine for hazardous conditions along each belt conveyor haulageway where a belt conveyor is operated. This examination may be conducted at the same time as the preshift examination of belt conveyors and belt conveyor haulageways, if the examination is conducted within 3 hours before the oncoming shift.

(c) Persons conducting the on-shift examination shall determine at the following locations:

(1) The volume of air in the last open crosscut of each set of entries or rooms on each section and areas where mechanized mining equipment is being installed or removed. The last open crosscut is the crosscut in the line of pillars containing the permanent stoppings that separate the intake air courses and the return air courses.

(2) The volume of air on a longwall or shortwall, including areas where longwall or shortwall equipment is being installed or removed, in the intake entry or entries at the intake end of the longwall or shortwall.

(3) The velocity of air at each end of the longwall or shortwall face at the locations specified in the approved ventilation plan.

(4) The volume of air at the intake end of any pillar line--

(i) Where a single split of air is used in the intake entry furthest from the return air course immediately outby the first open crosscut outby the line of pillars being mined; or

(ii) Where a split system is used in the intake entries of each split immediately inby the split point.

(d) (1) A qualified person shall make tests for methane--

(i) At the start of each shift at each working place before electrically operated equipment is energized; and

(ii) Immediately before equipment is energized, taken into, or operated in a working place; and

(iii) At 20-minute intervals, or more often if required in the approved ventilation plan at specific locations, during the operation of equipment in the working place.

(2) Except as provided for in paragraph (d)(3) of this section, these methane tests shall be made at the face from under permanent roof support, using extendable probes or other acceptable means. When longwall or shortwall mining systems are used, these methane tests shall be made at the shearer, the plow, or the cutting head. When mining has been stopped for more than 20 minutes, methane tests shall be conducted prior to the start up of equipment.

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(3) As an alternative method of compliance with paragraph (d)(2) of this section during roof bolting, methane tests may be made by sweeping an area not less than 16 feet inby the last area of permanently supported roof, using a probe or other acceptable means. This method of testing is conditioned on meeting the following requirements:

(i) The roof bolting machine must be equipped with an integral automated temporary roof support (ATRS) system that meets the requirements of 30 CFR 75.209.

(ii) The roof bolting machine must have a permanently mounted, MSHA-approved methane monitor which meets the maintenance and calibration requirements of 30 CFR 75.342(a)(4), the warning signal requirements of 30 CFR 75.342(b), and the automatic de-energization requirements of 30 CFR 75.342(c).

(iii) The methane monitor sensor must be mounted near the inby end and within 18 inches of the longitudinal center of the ATRS support, and positioned at least 12 inches from the roof when the ATRS is fully deployed.

(iv) Manual methane tests must be made at intervals not exceeding 20 minutes. The test may be made either from under permanent roof support or from the roof bolter's work position protected by the deployed ATRS.

(v) Once a methane test is made at the face, all subsequent methane tests in the same area of unsupported roof must also be made at the face, from under permanent roof support, using extendable probes or other acceptable means at intervals not exceeding 20 minutes.

(vi) The district manager may require that the ventilation plan include the minimum air quantity and the position and placement of ventilation controls to be maintained during roof bolting.

(e) If auxiliary fans and tubing are used, they shall be inspected frequently.

(f) During each shift that coal is produced and at intervals not exceeding 4 hours, tests for methane shall be made by a certified person or by an atmospheric monitoring system (AMS) in each return split of air from each working section between the last working place, or longwall or shortwall face, ventilated by that split of air and the junction of the return air split with another air split, seal, or worked-out area. If

auxiliary fans and tubing are used, the tests shall be made at a location outby the auxiliary fan discharge.

(g) Certification. (1) The person conducting the on-shift examination in belt haulage entries shall certify by initials, date, and time that the examination was made. The certified person shall certify by initials, date, and the time at enough locations to show that the entire area has been examined.

(2) The certified person directing the on-shift examination to assure compliance with the respirable dust control parameters specified in the mine ventilation plan shall certify by initials, date, and time that the examination was made.

[61 FR 9829, Mar. 11, 1996; 61 FR 26442, May 28, 1996, as amended at 68 FR 40138, July 7, 2003]

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Sec. 75.363 Hazardous conditions; posting, correcting and recording.

(a) Any hazardous condition found by the mine foreman or equivalent mine official, assistant mine foreman or equivalent mine official, or other certified persons designated by the operator for the purposes of conducting examinations under this subpart D, shall be posted with a conspicuous danger sign where anyone entering the areas would pass. A hazardous condition shall be corrected immediately or the area shall remain posted until the hazardous condition is corrected. If the condition creates an imminent danger, everyone except those persons referred to in section 104(c) of the Act shall be withdrawn from the area affected to a safe area until the hazardous condition is corrected. Only persons designated by the operator to correct or evaluate the condition may enter the posted area.

(b) A record shall be made of any hazardous condition found. This record shall be kept in a book maintained for this purpose on the surface at the mine. The record shall be made by the completion of the shift on which the hazardous condition is found and shall include the nature and location of the hazardous condition and the corrective action taken. This record shall not be

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required for shifts when no hazardous conditions are found or for hazardous conditions found during the preshift or weekly examinations inasmuch as these examinations have separate recordkeeping requirements.

(c) The record shall be made by the certified person who conducted the examination or a person designated by the operator. If made by a person other than the certified person, the certified person shall verify the record by initials and date by or at the end of the shift for which the examination was made. Records shall be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman's or equivalent mine official's next regularly scheduled working shift. The record shall be made in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(d) Retention period. Records shall be retained at a surface location at the mine for at least 1 year and shall be made available for inspection by authorized representatives of the Secretary and the representative of miners.

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Sec. 75.364 Weekly examination.

(a) Worked-out areas. (1) At least every 7 days, a certified person shall examine unsealed worked-out areas where no pillars have been recovered by traveling to the area of deepest penetration; measuring methane and oxygen concentrations and air quantities and making tests to determine if the air is moving in the proper direction in the area. The locations of measurement points where tests and measurements will be performed shall be included in the mine ventilation plan and shall be adequate in number and location to assure ventilation and air quality in the area. Air quantity measurements shall also be made where the air enters and leaves the worked-out area. An alternative method of evaluating the ventilation of the area may be approved in the ventilation plan.

(2) At least every 7 days, a certified person shall evaluate the effectiveness of bleeder systems required by Sec. 75.334 as follows:

(i) Measurements of methane and oxygen concentrations and air quantity and a test to determine if the air is moving in its proper direction shall be made where air enters the worked-out area.

(ii) Measurements of methane and oxygen concentrations and air quantity and a test to determine if the air is moving in the proper direction shall be made immediately before the air enters a return split of air.

(iii) At least one entry of each set of bleeder entries used as part of a bleeder system under Sec. 75.334 shall be traveled in its entirety. Measurements of methane and oxygen concentrations and air quantities and a test to determine if the air is moving in the proper direction shall be made at the measurement point locations specified in the mine ventilation plan to determine the effectiveness of the bleeder system.

(iv) In lieu of the requirements of paragraphs (a)(2)(i) and (iii) of this section, an alternative method of evaluation may be specified in the ventilation plan provided the alternative method results in proper evaluation of the effectiveness of the bleeder system.

(b) Hazardous conditions. At least every 7 days, an examination for hazardous conditions at the following locations shall be made by a certified person designated by the operator:

(1) In at least one entry of each intake air course, in its entirety, so that the entire air course is traveled.

(2) In at least one entry of each return air course, in its entirety, so that the entire air course is traveled.

(3) In each longwall or shortwall travelway in its entirety, so that the entire travelway is traveled.

(4) At each seal along return and bleeder air courses and at each

seal along intake air courses not examined under Sec. 75.360(b)(5).

(5) In each escapeway so that the entire escapeway is traveled.

(6) On each working section not examined under Sec. 75.360(b)(3) during the previous 7 days.

(7) At each water pump not examined during a preshift examination conducted during the previous 7 days.

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(c) Measurements and tests. At least every 7 days, a certified person shall--

(1) Determine the volume of air entering the main intakes and in each intake split;

(2) Determine the volume of air and test for methane in the last open crosscut in any pair or set of developing entries or rooms, in the return of each split of air immediately before it enters the main returns, and where the air leaves the main returns; and

(3) Test for methane in the return entry nearest each set of seals immediately after the air passes the seals.

(d) Hazardous conditions shall be corrected immediately. If the condition creates an imminent danger, everyone except those persons referred to in Sec. 104(c) of the Act shall be withdrawn from the area affected to a safe area until the hazardous condition is corrected.

(e) The weekly examination may be conducted at the same time as the preshift or on-shift examinations.

(f) (1) The weekly examination is not required during any 7 day period in which no one enters any underground area of the mine.

(2) Except for certified persons required to make examinations, no one shall enter any underground area of the mine if a weekly examination has not been completed within the previous 7 days.

(g) Certification. The person making the weekly examinations shall certify by initials, date, and the time that the examination was made. Certifications and times shall appear at enough locations to show that the entire area has been examined.

(h) Recordkeeping. At the completion of any shift during which a portion of a weekly examination is conducted, a record of the results of each weekly examination, including a record of hazardous conditions found during each examination and their locations, the corrective action taken, and the results and location of air and methane measurements, shall be made. The results of methane tests shall be recorded as the percentage of methane measured by the examiner. The record shall be made by the person making the examination or a person designated by the operator. If made by a person other than the examiner, the examiner shall verify the record by the initials and date by or at the end of the shift for which the examination was made. The record shall be countersigned by the mine foreman or equivalent mine official by the end of the mine foreman's or equivalent mine official's next regularly scheduled working shift. The records required by this section shall be made in a secure book that is not susceptible to alteration or electronically in a computer system so as to be secure and not susceptible to alteration.

(i) Retention period. Records shall be retained at a surface location at the mine for at least 1 year and shall be made available for inspection by authorized representatives of the Secretary and the representative of miners.

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Sec. 75.370 Mine ventilation plan; submission and approval.

(a) (1) The operator shall develop and follow a ventilation plan approved by the district manager. The plan shall be designed to control methane and respirable dust and shall be suitable to the conditions and mining system at the mine. The ventilation plan shall consist of two parts, the plan content as prescribed in Sec. 75.371 and the ventilation map with information as prescribed in Sec. 75.372. Only that portion of the map which contains information required under Sec. 75.371 will be subject to approval by the district manager.

(2) The proposed ventilation plan and any revision to the plan shall be submitted in writing to the district manager. When revisions to a ventilation plan are proposed, only the revised pages, maps, or sketches of the plan need to be submitted. When required in writing by the district manager, the operator shall submit a fully revised plan by consolidating the plan and all revisions in an orderly manner and by deleting all outdated material.

(3) (i) The mine operator shall notify the representative of miners at least 5 days prior to submission of a mine ventilation plan and any revision to a mine ventilation plan. If requested, the mine operator shall provide a copy to the representative of miners at the time of notification. In the event of a
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situation requiring immediate action on a plan revision, notification of the revision shall be given, and if requested, a copy of the revision shall be provided, to the representative of miners by the operator at the time of submittal;

(ii) A copy of the proposed ventilation plan, and a copy of any proposed revision, submitted for approval shall be made available for inspection by the representative of miners; and

(iii) A copy of the proposed ventilation plan, and a copy of any proposed revision, submitted for approval shall be posted on the mine bulletin board at the time of submittal. The proposed plan or proposed revision shall remain posted until it is approved, withdrawn or denied.

(b) Following receipt of the proposed plan or proposed revision, the representative of miners may submit timely comments to the district manager, in writing, for consideration during the review process. A copy of these comments shall also be provided to the operator by the district manager upon request.

(c) (1) The district manager will notify the operator in writing of the approval or denial of approval of a proposed ventilation plan or proposed revision. A copy of this notification will be sent to the

representative of miners by the district manager.

(2) If the district manager denies approval of a proposed plan or revision, the deficiencies of the plan or revision shall be specified in writing and the operator will be provided an opportunity to discuss the deficiencies with the district manager.

(d) No proposed ventilation plan shall be implemented before it is approved by the district manager. Any intentional change to the ventilation system that alters the main air current or any split of the main air current in a manner that could materially affect the safety and health of the miners, or any change to the information required in Sec. 75.371 shall be submitted to and approved by the district manager before implementation.

(e) Before implementing an approved ventilation plan or a revision to a ventilation plan, persons affected by the revision shall be instructed by the operator in its provisions.

(f) The approved ventilation plan and any revisions shall be--

(1) Provided upon request to the representative of miners by the operator following notification of approval;

(2) Made available for inspection by the representative of miners; and

(3) Posted on the mine bulletin board within 1 working day following notification of approval. The approved plan and revisions shall remain posted on the bulletin board for the period that they are in effect.

(g) The ventilation plan for each mine shall be reviewed every 6 months by an authorized representative of the Secretary to assure that it is suitable to current conditions in the mine.

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Sec. 75.371 Mine ventilation plan; contents.

The mine ventilation plan shall contain the information described below and any additional provisions required by the district manager:

(a) The mine name, company name, mine identification number, and the name of the individual submitting the plan information.

(b) Planned main mine fan stoppages, other than those scheduled for testing, maintenance or adjustment, including procedures to be followed during these stoppages and subsequent restarts (see Sec. 75.311(a)) and the type of device to be used for monitoring main mine fan pressure, if other than a pressure recording device (see 75.310(a)(4)).

(c) Methods of protecting main mine fans and associated components from the forces of an underground explosion if a 15-foot offset from the nearest side of the mine opening is not provided (see Sec. 75.310(a)(6)); and the methods of protecting main mine fans and intake air openings if combustible material will be within 100 feet of the area surrounding the fan or these openings (see Sec. 75.311(f)).

(d) Persons that will be permitted to enter the mine, the work these persons will do while in the mine, and electric power circuits that will be energized when a back-up fan system is used that does not provide the ventilating quantity provided by the main mine fan (see Sec. 75.311(c)).
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(e) The locations and operating conditions of booster fans installed in anthracite mines (see Sec. 75.302).

(f) Section and face ventilation systems used, including drawings illustrating how each system is used, and a description of each different dust suppression system used on equipment on working sections.

(g) Locations where the air quantities must be greater than 3,000 cubic feet per minute (see Sec. 75.325(a)(1)).

(h) In anthracite mines, locations where the air quantities must be greater than 1,500 cubic feet per minute (see Sec. 75.325(e)(1)).

(i) Working places and working faces other than those where coal is being cut, mined, drilled for blasting or loaded, where a minimum air quantity will be maintained, and the air quantity at those locations (see Sec. 75.325(a)(1)).

(j) The operating volume of machine mounted dust collectors or diffuser fans, if used (see Sec. 75.325(a)(3)).

(k) The minimum mean entry air velocity in exhausting face ventilation systems where coal is being cut, mined, drilled for blasting, or loaded, if the velocity will be less than 60 feet per

minute. Other working places where coal is not being cut, mined, drilled for blasting or loaded, where at least 60 feet per minute or some other minimum mean entry air velocity will be maintained (see Sec. 75.326).

(l) The maximum distance if greater than 10 feet from each working face at which face ventilation control devices will be installed (see Sec. 75.330(b)(2)). The working places other than those where coal is being cut, mined, drilled for blasting or loaded, where face ventilation control devices will be used (see Sec. 75.330(b)(1)(ii).

(m) The volume of air required in the last open crosscut or the quantity of air reaching the pillar line if greater than 9,000 cubic feet per minute (see Sec. 75.325(b)).

(n) In anthracite mines, the volume of air required in the last open crosscut or the quantity of air reaching the pillar line if greater than 5,000 cubic feet per minute (see Sec. 75.325(e)(2)).

(o) Locations where separations of intake and return air courses will be built and maintained to other than the third connecting crosscut outby each working face (see Sec. 75.333(b)(1)).

(p) The volume of air required at the intake to the longwall sections, if different than 30,000 cubic feet per minute (see Sec. 75.325(c)).

(q) The velocities of air on a longwall or shortwall face, and the locations where the velocities must be measured (see Sec. 75.325(c)(2)).

(r) The minimum quantity of air that will be provided during the installation and removal of mechanized mining equipment, the location where this quantity will be provided, and the ventilation controls that will be used (see Sec. 75.325(d), (g), and (i)).

(s) The locations and frequency of the methane tests if required more often by Sec. 75.362(d)(1)(iii) (see Sec. 75.362 (d)(1)(iii).

(t) The locations where samples for ``designated areas'' will be collected, including the specific location of each sampling device, and the respirable dust control measures used at the dust generating sources for these locations (see Sec. 70.208 of this chapter).

(u) The methane and dust control systems at underground dumps, crushers, transfer points, and haulageways.

(v) Areas in trolley haulage entries where the air velocity will be greater than 250 feet per minute and the velocity in these areas (see Sec. 75.327(b)).

(w) Locations where entries will be advanced less than 20 feet from the inby rib without a crosscut being provided where a line brattice will be required. (see Sec. 75.333(g)).

(x) A description of the bleeder system to be used, including its design (see Sec. 75.334).

(y) The means for determining the effectiveness of bleeder systems (see Sec. 75.334(c)(2)).

(z) The locations where measurements of methane and oxygen concentrations and air quantities and tests to determine whether the air is moving in the proper direction will be made to evaluate the ventilation of nonpillared worked-out areas (see Sec. 75.364 (a)(1)) and the effectiveness of bleeder systems (see Sec. 75.364 (a)(2)(iii). Alternative methods of evaluation of the effectiveness of bleeder systems (Sec. 75.364 (a)(2)(iv)).

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(aa) The means for adequately maintaining bleeder entries free of obstructions such as roof falls and standing water (see Sec. 75.334(c)(3)).

(bb) The location of ventilation devices such as regulators,

stoppings and bleeder connectors used to control air movement through worked-out areas (see Sec. 75.334(c)(4)). The location and sequence of construction of proposed seals for each worked-out area. (see Sec. 75.334(e)).

(cc) In mines with a demonstrated history of spontaneous combustion: a description of the measures that will be used to detect methane, carbon monoxide, and oxygen concentration during and after pillar recovery and in worked-out areas where no pillars have been recovered (see Sec. 75.334(f)(1); and, the actions which will be taken to protect miners from the hazards associated with spontaneous combustion (see Sec. 75.334(f)(2). If a bleeder system will not be used, the methods that will be used to control spontaneous combustion, accumulations of methane-air mixtures, and other gases, dusts, and fumes in the worked-out area (see Sec. 75.334(f)(3)).

(dd) The location of all horizontal degasification holes that are longer than 1,000 feet and the location of all vertical degasification holes.

(ee) If methane drainage systems are used, a detailed sketch of each system, including a description of safety precautions used with the systems.

(ff) A description of the methods and materials to be used to seal worked-out areas if those methods or materials will be different from those specified by Sec. 75.335(a)(1).

(gg) The alternative location for the additional sensing device if the device will not be installed on the longwall shearing machine (see Sec. 75.342(a)(2)).

(hh) The ambient level in parts per million of carbon monoxide, and the method for determining the ambient level, in all areas where carbon monoxide sensors are installed.

(ii) The locations (designated areas) where dust measurements would be made in the belt entry when belt air is used to ventilate working sections or areas where mechanized mining equipment is being installed or removed, in accordance with Sec. 75.350(b)(3).

(jj) The locations where velocities in the belt entry exceed limits set forth in Sec. 75.350(a)(2), and the maximum approved velocity for each location.

(kk) The locations where air quantities are measured as set forth in Sec. 75.350(b)(6).

(ll) The locations and use of point-feed regulators, in accordance with Sec. Sec. 75.350(c) and 75.350(d)(5).

(mm) The location of any additional carbon monoxide or smoke sensor installed in the belt air course, in accordance with Sec. 75.351(e)(5).

(nn) The length of the time delay or any other method used to reduce the number of non-fire related alert and alarm signals from carbon monoxide sensors, in accordance with Sec. 75.351(m).

(oo) The reduced alert and alarm settings for carbon monoxide sensors, in accordance with Sec. 75.351(i)(2).

(pp) The alternate detector and the alert and alarm levels associated with the detector, in accordance with Sec. 75.352(e)(7).

(qq) The distance that separation between the primary escapeway and the belt or track haulage entries will be maintained if other than to the first connecting crosscut outby the section loading point (see Sec. 75.380(g)).

(rr) In anthracite mines, the dimensions of escapeways where the pitch of the coal seam does not permit escapeways to be maintained 4 feet by 5 feet and the locations where these dimensions must be maintained (see Sec. 75.381(c)(4)).

(ss) Areas designated by the district manager where measurements of CO and NO2 concentrations will be made (see Sec. 70.1900(a)(4)).

(tt) Location where the air quantity will be maintained at the section loading point (see Sec. 75.325(f)(2)).

(uu) Any additional location(s) required by the district manager where a minimum air quantity must be maintained for an individual unit of diesel-powered equipment. (see Sec. 75.325(f)(5)).

(vv) The minimum air quantities that will be provided where multiple units of diesel-powered equipment are operated (see Sec. 75.325(g) (1)-(3) and (i)).

(ww) The diesel-powered mining equipment excluded from the calculation under Sec. 75.325(g). (see Sec. 75.325(h)).
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(xx) Action levels higher than the 50 percent level specified by Sec. 70.1900(c). (see Sec. 75.325(j)).

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TITLE 30--MINERAL RESOURCES

CHAPTER I--MINE SAFETY AND HEALTH ADMINISTRATION, DEPARTMENT OF LABOR
PART 75_MANDATORY SAFETY STANDARDS_UNDERGROUND COAL MINES--Table of Contents

Subpart D_Ventilation

Sec. 75.382 Mechanical escape facilities.

(a) Mechanical escape facilities shall be provided with overspeed, overwind, and automatic stop controls.

(b) Every mechanical escape facility with a platform, cage, or other device shall be equipped with brakes that can stop the fully loaded platform, cage, or other device.

(c) Mechanical escape facilities, including automatic elevators, shall be examined weekly. The weekly examination of this equipment may be conducted at the same time as a daily examination required by Sec. 75.1400-3.

(1) The weekly examination shall include an examination of the headgear, connections, links and chains, overspeed and overwind controls, automatic stop controls, and other facilities.

(2) At least once each week, the hoist shall be run through one complete cycle of operation to determine that it is operating properly.

(d) A person trained to operate the mechanical escape facility always shall be available while anyone is underground to provide the mechanical escape facilities, if required, to the bottom of each shaft and slope opening that is part of an escapeway within 30 minutes after personnel on the surface have been notified of an emergency requiring evacuation. However, no operator is required for automatically operated cages, platforms, or elevators.

(e) Mechanical escape facilities shall have rated capacities consistent with the loads handled.

(f) Manually-operated mechanical escape facilities shall be equipped with
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indicators that accurately and reliably show the position of the facility.

(g) Certification. The person making the examination as required by paragraph (c) of this section shall certify by initials, date, and the time that the examination was made. Certifications shall be made at or near the facility examined.